

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Boyer, Frank Examiner: Stephen M. Johnson
Application No.: 10/800,403 Art Unit: 3641
Filing Date: 12 March 2004 Confirm. No.: 7143
For: SHOTGUN CHOKE WITH INTEGRAL WAD-STOPPING FEATURE

* * *
November 23, 2009

SUBSTITUTE APPEAL BRIEF

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This Substitute Appeal Brief is responsive to the Office Communication of October 23, 2009 (Paper No. 20091021), the Official Action dated 20 July, 2009 and in accordance with the Order of the Board of Patent Appeals And Interferences (the "Board") of June 29, 2009, returning un-docketed the previously filed Appeal Brief with direction to address certain informalities related to the claims prior to docketing. An Amendment correcting the claims as directed by the Board is again filed simultaneously herewith. This is an Appeal from the final rejection of Claim 3 of the subject application. No claims stand allowed.

REAL PARTY IN INTEREST

The real party in interest is the inventor, Frank Boyer, 11330 Wildberry Court Glen Rock, PA 17327.

RELATED APPEALS AND INTERFERENCES

Appellant avers that there are no other prior or pending appeals, interferences or judicial proceedings known to appellant, the appellant's legal representative, or assignee which may be

related to, directly affect or be directly affected by or have a bearing on the Board's decision in this pending appeal.

STATUS OF CLAIMS

Claim 3 is pending in the application. Claims 2 and 10 were previously canceled. Claims 1 and 4 through 9 are cancelled by Amendment filed simultaneously with this Substitute Appeal Brief, which Amendment also rewrote claim 3 in independent form to include the limitations of claim 1 from which it previously depended as directed by the Board. Claim 3 is thus the sole claim involved in this Appeal. Please see Appendix A for a copy of claim 3.

STATUS OF AMENDMENTS

The application was filed on March 12, 2004 and claims the benefit of Provisional Patent Application 60/454,368 filed March 12, 2003. A first official action was mailed July 11, 2005 and Appellant timely responded by Amendment filed October 11, 2005. A second and final Official Action was mailed December 20, 2005. Appellant initiated a telephone interview which failed to resolve the issues. An Amendment canceling claims 1 and 4-9 and rewriting claim 3 to incorporate the limitations of claim 1 pursuant to the Board's Order of June 29, 2009 was filed on August 20, 2009 but was not entered. An Amendment canceling claims 1 and 4-9 and rewriting claim 3 to incorporate the limitations of claim 1 pursuant to the Board's Order of June 29, 2009 was again filed on simultaneously with this brief and remains pending. Note that the text of claim 3 reproduced in Appendix A reflects the claim per this simultaneously filed amendment as directed in the Official Action of 7/20/2009.

SUMMARY OF CLAIMED SUBJECT MATTER

The present invention is a shotgun choke 2 with integral wad stopper [see FIG. 1 and 0017 of the published specification] comprising a hollow tubular member screw-inserted onto the muzzle end of an existing shotgun. The device is specifically for shotguns which fire a cartridge comprising multiple pellets backed by a cotton wad, and the device serves to confine the shot pattern of the impacting pellets. This requires a combination of two features: 1) an integral wad-stopper formed by a pattern of annular sharp-edged steps [FIG. 2, ref 30a-e] spaced from the input end of the inner channel 20 through approximately $\frac{2}{3}$ the length, these steps serving to catch and retard the cotton wad following the shot; and 2) the inner channel 20 of the gun barrel is tapered slightly from the input end through the length of the choke (by progressively constricting the stepwise annular steps), thereby constricting the pellets passing there through. [0020 and FIG. 2, ref 30a-e]. More specifically, when the choke 2 is installed, the shot pellets pass through an inner channel 20 of the choke 2. [0019]. The integral wad-stopping feature is accomplished by forming a pattern of annular sharp-edged [claim 3] steps from the input end through approximately $\frac{2}{3}$ the length of the choke 2, the steps serving to catch and rapidly retard the cotton wad following the shot. A specific pattern of these steps is disclosed including steps at $\frac{1}{10}$ " inside the input end, $\frac{5}{10}$ " inside the input end, $\frac{9}{10}$ " inside the input end, $1\frac{3}{10}$ " inside the input end, and $1\frac{7}{10}$ " inside the input end. Each of the steps 30a-e are raised approximately 0.004" (0.1 mm), and the raised lip of each inward step-projection is sharp-edged to catch and progressively retard the traveling wad to separate it from the shot. In addition, the inner channel 20 is gradually tapered to constrict the pellets passing there through in order to control the shot pattern. [0020]. The taper is augmented by the steps

30a-e themselves which progressively define a smaller internal diameter within the cylinder to contribute to the overall taper.

The above constitutes a concise explanation of the invention defined in the claims involved in the Appeal.

GROUND OF REJECTION TO BE REVIEWED ON APPEAL

There are six categorical issues set forth as follows:

- 1st: Whether claim 3 is anticipated under 35 U.S.C. 102(b) over Dow (2,348,114)?
- 2d: Whether claim 3 is obvious under 35 U.S.C. 103(a) as being unpatentable over Janecek et al. (2,315,207) and Catron (2,372,315)?
- 3d: Whether claim 3 is obvious under 35 U.S.C. 103(a) as being unpatentable over Briley (4,386,477) and Janecek et al. (2,315,207)?
- 4th: Whether claim 3 is anticipated under 35 U.S.C. 102(b) over Linde (4,058,925)?
- 5th: Whether claim 3 is indefinite under 35 U.S.C. 112, second paragraph?
- 6th: Whether claim 3 is indefinite under 35 U.S.C. 112, first paragraph?

APPELLANTS' ARGUMENT

1st: The Examiner clearly erred in rejecting claim 3 as being anticipated under 35 U.S.C. 102(b) over Dow (2348114).

Dow discloses a gun stabilizer for venting gases radially outward from a gun barrel, thereby stabilizing the gun. Venting gases eliminates kick-back, and Dow has nothing to do with confining or focusing the shot pattern of a shotgun. Dow employs a series of exhaust apertures formed as rectangular slots exiting the stabilizer. The Examiner erroneously equates this "flash suppressor" with a choke, but they are two different things and Dow is not a choke. Dow has no equivalent structure for confining or focusing the shot pattern of a shotgun, and conversely the

present invention has nothing to do with flash suppressors. The present invention requires two distinct features: 1) an integral wad-stopping feature formed by a pattern of annular sharp-edged steps from the input end through approximately $\frac{2}{3}$ the length of the choke, these steps serving to catch and retard the cotton wad following the shot; and 2) the inner channel of the gun barrel is tapered slightly from the input end through the length of the choke (by progressively constricting the stepwise annular wad-stopping projections), thereby constricting the pellets passing there through in order to control the shot pattern. In contrast, the Dow flash suppressor includes gas vents as "muzzle brakes" to disperse gas. The Examiner equates the gas vent openings of Dow with the stepwise annular wad-stopping projections of the present claim 3. However, claim 3 specifically requires a hollow tubular member having a coupling at one end for concentrically securing said tubular member to a shotgun, said tubular member being defined by an internal channel having a stepwise taper running away from the coupling end to constrict shotgun pellets passing there through; said stepwise taper being further defined by a plurality of raised annular step-projections spaced evenly along at least two-thirds a length of said channel and each defined by a sharp edge disposed toward said coupling end of said tubular member to retard and separate wadding from behind said shotgun pellets while passing through said tubular member.

Dow's flash suppressor has a coupling at one end for concentrically securing said tubular member to a gun, and the tubular member has an internal channel through which shot passes. However, the vents are not in communication with the channel at all, but instead open outwardly from an outer wall of the flash suppressor. Consequently, these vents do not define the channel at all. and it cannot be said that the internal channel has "a stepwise taper running away from the

coupling end to constrict shotgun pellets passing there through” as required by claim 3.

Moreover, since Dow's vents are exterior to the bore of the barrel (the channel), the channel itself is not “defined by a plurality of raised annular step-projections spaced evenly along at least two-thirds a length of said channel and each defined by a sharp edge disposed toward said coupling end of said tubular member to retard and separate wadding from behind said shotgun pellets while passing through said tubular member” also as required by claim 3. Indeed, Dow's gas vents are not annular step-wise projections having sharp leading edges facing the shot, the vents never even come in contact with the shot or the wad, and they certainly don't meet the literal language of claims 3, nor the spirit and intent (as reflected in the functional language) to constrict the pellet pattern whilst retarding and separate wadding from behind shotgun pellets passing through the channel. Dow is for venting gases, not for catching a shotgun wad while patterning the shot. In addition to the foregoing distinctions, Appellant notes that Dow shows a tubular member with an open-chamber with an exit channel extending only partially through the tubular member. This would be inoperative for shotgun pellets which would spread into the chamber and destroy the vents before exiting through the channel. Claim 3 distinguishes on this basis as well since the tubular member is not “defined by an internal channel having a stepwise taper running away from the coupling end” to constrict shotgun pellets passing there through. The channel only exits the tubular member. On the basis of these structural limitations which are not met by Dow, claim 3 is patentably distinguished.

2d: The Examiner clearly erred in rejecting claim 3 under 35 U.S.C. 103(a) as being unpatentable over Janecek et al. (2,315,207) and Catron (2,372,315).

According to the Examiner, Janecek et al. discloses all elements of the invention previously set forth in claim 1 and now incorporated into claim 3 except for a projectile

including a plurality of pellets. In fact, Janecek discloses a single-bullet size reducer in which a bullet passing through is chiseled down by a series of teeth to a smaller caliber. Catron' 315 discloses an anti-recoil shotgun with no similarities to the present invention other than the fact that it shoots a shotgun cartridge including wadding and pellets. Nevertheless, the Examiner maintains that one skilled in the art would find it obvious to use the caliber-reducer of Janecek et al. with shotgun cartridges as in Catron to provide the choke with wad stopper of the present invention. This is in error for three reasons. First, both of these cited references are nonanalogous art. Analogous art is that which is "reasonably pertinent to the particular problem with which the inventor is involved." *Heidelberger Druckmaschinen AG v. Hantscho Commercial Prods., Inc.*, 21 F.3d 1068, 1072, 30 USPQ2d 1377, 1379 (Fed. Cir.1994). The particular problem pursued in the present invention is the separation of wad from shot (wad stopper), plus the constriction of the shot pattern of shotgun pellets (choke), in a combined format. One skilled in the art seeking to solve the foregoing problems would have no motivation to look to either of the foregoing patents inasmuch as neither one attempts to separate wad from shot (wad stopper), or constrict the shot pattern of shotgun pellets (choke), let alone in a combined format. Second, any attempt to fire a shotgun cartridge as in Catron '315 through a bullet size reducer (Janecek) would destroy both, and the combination suggested by the Examiner is inoperative. Third, to establish obviousness based on a combination of the elements disclosed in the prior art, there must be some motivation, suggestion or teaching of the desirability of making the specific combination that was made by the applicant." There is no such motivation here.

Finally, even if the combination is proper it still fails to show "A choke with integral wad Stopper" as required by claim 3, or a choke for use with an existing shotgun (Janecek et al. only

works with single shot carbines) or an internal channel having *a stepwise taper running away from the coupling end* to constrict shotgun pellets passing there through, nor any "raised annular *step-projections* spaced evenly along at least two-thirds a length of said channel to retard and separate wadding from behind said shotgun pellets while passing through said tubular member."

(Janecek et al. only has knife-edged rings but no stepwise taper, and for an entirely different purpose). Catron' 315 fails to teach or suggest any of these structural features. Accordingly, claim 3 is distinguished.

3d: The Examiner clearly erred in rejecting claim 3 under 35 U.S.C. 103(a) as being unpatentable over Briley (4,386,477) and Janecek et al. (2,315,207).

Briley '477 is a shotgun choke, but without any wad stopping feature (or raised annular step-projections each comprising a sharp edge disposed toward said coupling end of said tubular member). One skilled in the art seeking to incorporate a wad stopper would not look to Janecek's device as it is only intended to file down the size of a single-bullet as it passes through. This has nothing to do with the separation of wad from shot (wad stopper), or the constriction of the shot pattern of shotgun pellets (choke). As above, Janecek is non-analogous art and the combination suggested by the Examiner is improper. Moreover, there is no motivation, suggestion or teaching of the desirability of making the combination for Appellant's purpose, and one skilled in the art simply would not make the combination. Even so the combination fails to teach "A choke with integral wad stopper" as required by claim 3, or a choke for use with an existing shotgun having an internal channel with *a stepwise taper running away from the coupling end* to constrict shotgun pellets passing there through, nor any "raised annular *step-projections* spaced evenly along at least two-thirds a length of said channel to retard and separate wadding from behind said shotgun pellets while passing through said tubular member." (Janecek et al. only has knife-edged

rings but no stepwise taper, and for an entirely different purpose). Accordingly, claim 3 is distinguished.

4th: The Examiner clearly erred in rejecting claim 3 under 35 U.S.C. 102(b) as being anticipated by Linde (4,058,925).

Linde '925 discloses a shotgun choke formed with an internal channel having a stepwise taper that becomes more constricted toward the barrel of the gun. However, Linde has no counterpart wad stopper, nor the structure for it as recited in claim 3, namely a “plurality of raised annular step-projections comprises a sharp edge *disposed toward said coupling end of said tubular member*”. Linde '925 has only graduated ramps with no sharp edges at all as required by claim 3. Consequently, Linde does not and cannot retard and separate wadding from behind said shotgun pellets while passing through the tubular member. Therefore, claim 3 is distinguished.

5th: The Examiner clearly erred in rejecting claim 3 under 35 U.S.C. 112, second paragraph, because the phrase “a shotgun” previously of line 3 of claim 1 and now rewritten into a similar position in claim 3 (below) does not render the claim indefinite. The preamble of the claim makes it clear that the present invention is to be used with *an existing shotgun* (since no more specifics are given the preamble merely connotes that the present invention may be used with any existing shotgun). “[A] claim preamble has the import that the claim as a whole suggests for it.” *Bell Communications Research, Inc. v. Vitalink Communications Com.*, 55 F.3d 615, 620, 34 USPQ2d 1816, 1820 (Fed. Cir. 1995). The preamble now of claim 3 does not claim a shotgun, does not limit the structure of the claimed invention, and need not be treated as a claim limitation. See, e.g., *Corning Glass Works v. Sumitomo Elec. U.S.A., Inc.*, 868 F.2d 1251, 1257, 9 USPQ2d 1962, 1966 (Fed. Cir. 1989) Thus, when the phrase “a shotgun” in line 3 introduces a

shotgun as an element there is no conflict, no confusion, and it is inapposite whether “the shotgun” of the preamble is the same shotgun of line 3. The present invention may be used with *any existing shotgun*, and is claimed in the context of use with a *singular* shotgun (line 3). There is no indefiniteness.

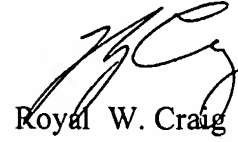
6th: The Examiner clearly erred in rejecting claim 3 under 35 U.S.C. 112, first paragraph, because the phrase “said stepwise taper being further defined by a plurality of raised annular step-projections spaced evenly along *at least* two-thirds a length of said channel” is amply supported in the specification. The specification clearly shows (in the FIGs.) a plurality of raised annular step-projections spaced evenly along two-thirds a length of said channel, and describes a plurality of raised annular step-projections spaced evenly along “approximately” two-thirds a length of said channel. [0020] Since this includes “at least” two-thirds Applicant is entitled to limit his claims to 2/3 and there is ample support for the limitation. Moreover, Appellant clearly discloses the measured position of these steps at 1/10” inside the input end, 5/10” inside the input end, 9/10” inside the input end, 1 and 3/10” inside the input end, and 1 and 7/10” inside the input end. Since the choke 2 itself is said to comprise a hollow cylindrical section of machined stainless steel of approximately 3” length this fully supports along approximately two-thirds and there is ample support for the limitation.

* * * * *

For the reasons set forth herein, it is believed that the Examiner erred and that this application clearly and patentably distinguishes over the prior art and is in proper condition for allowance. Reversal is respectfully requested.

Ex parte Frank Boyer
10/800,403

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'RC', is written over the printed name of Royal W. Craig.

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APPENDIX A: Claims Appendix

3. A choke with integral wad stopper for use with an existing shotgun, comprising:

a hollow tubular member having a coupling at one end for concentrically securing said tubular member to a shotgun, said tubular member being defined by an internal channel having a stepwise taper running away from the coupling end to constrict shotgun pellets passing there through;

said stepwise taper being further defined by a plurality of raised annular step-projections spaced evenly along at least two-thirds a length of said channel to retard and separate wadding from behind said shotgun pellets while passing through said tubular member, wherein each of said plurality of raised annular step-projections comprises a sharp edge disposed toward said coupling end of said tubular member.

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APPENDIX B: Evidence Appendix

There has been no evidence submitted pursuant to 37 C.F.R. §§ 1.130, 1.131, or 1.132 nor any other evidence entered by the Examiner and relied upon by appellant in the appeal.

Ex parte Frank Boyer
10/800,403

APPENDIX C: Related Proceedings Appendix

As stated above, there are no related appeal proceedings, nor any decisions rendered by a court or the Board in any related appeal proceeding.